

The claimed invention is:

1. A method for improving the color of discolored natural diamond, comprising:

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- (a) placing said discolored natural diamond in a pressure transmitting medium;
 - (b) consolidating said pressure transmitting medium into a pill;
 - (c) exposing said pill to elevated pressure and elevated temperature within the graphite stable or diamond stable range of the carbon phase diagram for a time sufficient to improve the color of said diamond; and
 - 10 (d) recovering said diamond.

2. The method of claim 1, wherein said discolored natural diamond is a Type IaB, Type IaA/B, Type IaA or Type Ib diamond.

3. The method of claim 1, wherein said discolored natural diamond is a Type IaB, Type IaA/B, Type IaA or Type Ib diamond with platelets.

4. The method of claim 1, wherein said discolored natural diamond is a Type IaB with a total nitrogen concentration less than 500 ppm.

5. The method of claim 1 wherein said discolored natural diamond is Type IaA/B with a total nitrogen concentration less than 500 ppm.

6. The method of claim 1 wherein said discolored natural diamond is Type IaA with a total nitrogen concentration less than 500 ppm.

7. The method of claim 1, wherein the recovered diamond is neon yellow-green color.

8. The method of claim 1, wherein the recovered diamond has yellowish green color.
9. The method of claim 1 wherein the recovered diamond has greenish yellow color.
10. The method of claim 1, wherein said elevated temperature ranges from about 1500° to 3500° C and said elevated pressure ranges from about 10 to about 100 kilobars.
11. The method of claim 6, wherein said elevated pressure ranges from about 20 to about 80 kilobars.
12. The method of claim 1, wherein said recovered diamond is subjected to step (c) a plurality of times.
13. The method of claim 1, wherein said pressure transmitting medium is thermally and chemically stable at HP/HT and is selected from the group consisting of a salt, an oxide, or graphite.
14. The method of claim 2 wherein the final concentration of A Centers is less than 50 ppm.
15. The method of claim 1 wherein the total concentration of nitrogen is less than 50 ppm.
16. The method of claim 1 where the final C Center concentration is less than 2 ppm.
17. The method of claim 9, wherein said pressure transmitting medium is a salt selected from the group consisting of sodium chloride, sodium iodide,

sodium bromide, potassium chloride, potassium iodide, potassium bromide, calcium chloride, calcium iodide and calcium bromide.

5 18. The method of claim 9, wherein said pressure transmitting medium is selected from the group consisting of magnesium oxide, calcium oxide, and mixtures thereof.

10 19. The method of claim 9, wherein said pressure transmitting medium is graphite.

20. The method of claim 1, wherein said elevated temperature and elevated pressure are maintained from 30 seconds to 96 hours.

15 21. The method of claim 1, wherein said elevated temperature and elevated pressure are maintained from 5 minutes to 24 hours.

22. The method of claim 1, wherein said elevated temperature and elevated pressure are maintained from about 5 minutes to about 1 hour.

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